

REMARKS

Claims 9-43 remain pending in the application. Applicants and the undersigned thank the Examiner for granting a telephone interview on April 15, 2008, and for the courtesies extended during the interview. In light of the discussion of the specification and independent claims in the interview, Applicants submit the following remarks.

Specification

The Examiner has objected to the specification as failing to provide proper antecedent basis for the claimed subject matter. Particularly, the Examiner indicated that the specification lacks a description of “a controller coupled to the actuator, wherein the controller controls the actuator to change gap distances between the target member and the first and second attracting members during an intermission of generating the attracting force” as recited in claim 24. Applicants respectfully disagree.

Exemplary support in the specification for the above-mentioned aspect recited in claim 24 can be found in paragraphs [040]-[042]. For example, paragraph [040] discloses that “[n]either E-I pair is active during the constant velocity portion of the trajectory, while fine stage actuator 440, a voice coil motor for instance, is responsible for positioning the fine stage.” The passage discloses that during an intermission of generating the attracting force (e.g., neither E-I pair being active), the position of the fine stage (the target member) relative to the coarse stage (the attracting members) can be adjusted. In view of this passage and other teachings in the specification, Applicants respectfully submit that specification provides adequate support for claim 24, and the rejection should be withdrawn.

Claim Rejections under 35 U.S.C. § 112

In the Office Action, claims 24 and 33 have been objected to under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Particularly, the Examiner indicated that the specification fails to disclose “a controller coupled to the actuator, wherein the controller controls the actuator to change gap distances between the target member and the first and second attracting members during an intermission of generating the attracting force” as recited in claim 24 and fails to disclose “the controller changes the gap distance during an intermission of generating the attracting force” as recited in claim 33. Applicants respectfully disagree.

As discussed above with respect to the objection to the specification, exemplary support for the aspects recited in claims 24 and 33 can be found in paragraphs [040]-[042]. For example, paragraph [040] discloses that “[n]either E-I pair is active during the constant velocity portion of the trajectory, while fine stage actuator 440, a voice coil motor for instance, is responsible for positioning the fine stage.” This passage discloses that during an intermission of generating the attracting force (e.g., neither E-I pair being active), the position of the fine stage (the target member) relative to the coarse stage (the attracting members) can be adjusted. In view of the passage and other teachings in paragraphs [040]-[042], Applicants respectfully submit that claims 24 and 33 are fully supported by the specification, and the rejection should be withdrawn.

The Examiner further objected to claims 24 and 33 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Particularly, the Examiner indicated

that "it does not appear to be possible to change gap distances without generating some sort of attracting force." Applicants respectfully disagree.

Claim 24 recites (also claim 32 which claim 33 depends from) "an attracting assembly ... generat[ing] attracting force" and "an actuator ... to change a relative position between the attracting assembly and the target assembly." As disclosed in paragraph [040], for example, while neither E-I pair (attracting assembly) is active, the fine stage actuator 440 can adjust the position of the fine stage relative to the coarse stage. Thus, without the attracting force, the actuator can change the gap distance between the attracting assembly and the target assembly. Applicants respectfully submit that claims 24 and 33 comport with the requirement of 35 U.S.C 112, second paragraph, and the rejection should be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claim 9-43 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,130,517 to Yuan et al. ("Yuan").

Claims 9-11

Independent claim 9 recites a method of moving a fine stage device including a step of "manipulating the relative position of the target member by moving the attracting framework relative to a base member to decrease the distance between one of the attracting members and the target member during a coarse stage adjustment phase." Applicants argued, in the Response to Office Action filed on November 13, 2007, that Yuan indicates "[c]oarse stage control system 310 moves coarse stage 110 as necessary to maintain an appropriate gap distance, i.e., less than 400 μm ," but does not

teach “manipulating the relative position … during a coarse stage adjustment phase” as recited in claim 9. (See Response to OA filed Nov. 13, 2007, p.15.) In response to the argument, the Examiner indicated that “in the event the fine stage adjustment creates a gap that is larger than 400 μm , then the coarse stage will act to decrease that distance back to the appropriate gap distance of 400 μm .” (See the OA, p. 13.) However, Yuan just discloses that the coarse stage control system moves coarse stage 110 as necessary to maintain the gap distance, but does not disclose a two-step positioning process (a fine stage adjustment and a coarse stage adjustment) as mentioned by the Examiner.

Moreover, as shown in FIGS. 9 and 10 and also illustrated in col. 8, ll. 12-19, in Yuan, the feedforward force signal is sent to both fine stage control system 200 and coarse stage control system 310 at the same time. It is clear that, in Yuan, the fine stage 120 and the coarse stage 110 are controlled simultaneously, thus “reducing settling time.” Yuan does not teach “manipulating the relative position the relative position of the target member by moving the attracting framework relative to a base member to decrease the distance between one of the attracting members and the target member during a coarse stage adjustment phase” as recited in claim 9.

Claims 10 and 11 depend from claim 9 and are patentable for at least the same reasons as set forth above in connection with claim 9.

Claim 12

Independent claim 12 claims a second assembly including attracting members. In addition to the attracting members, claim 12 further recites an actuator associated with the second assembly that can adjust “a relative distance between the target

member and the first attracting member.” Yuan fails to disclose at least the actuator as recited in claim 12.

Moreover, claim 12 recites that “during a constant velocity phase, the actuator changes a gap size between the target member and an attracting member that provides deceleration during a deceleration phase by moving at least one of the first attracting member and the second attracting member relative to a base member.” As discussed above, Yuan does not teach the actuator associated with the second assembly, nor does Yuan teach that “during a constant velocity phase, the actuator changes a gap size between the target member and an attracting member.”

Claims 13-43

Independent claims 13, 14, 15, 17, 19, 21, 24, and 32 each recite an actuator and changing the gap size during a constant velocity phase. As discussed above with respect to claim 12, Yuan fails to teach these aspects. Thus, these independent claims should be allowable in view of Yuan.

Independent claim 40 recites “changing a position of the target member with respect to the first and the second attracting members when the fine stage is moving at a constant velocity.” As discussed above, Yuan intends to maintain the appropriate gap distance, but not to change the gap size. Thus, Yuan fails to disclose “changing a position of the target member with respect to the first and the second attracting members when the fine stage is moving at a constant velocity.” Claim 40 is patentable over Yuan.

Dependent claims 16, 18, 20, 22-23, 25-31, 33-39, and 41-43 provide further aspects in addition to those in their respective base independent claims and thus should

be allowable for at least the reasons as set forth above with respect to the independent claims.

Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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